第２講　長文問題演習②

ポイント

❶ 対比の発見
❷ 抽象の発見
❸ 追加の発見

次の英文を読んで下の問いに答えなさい。

Jobs for the Future

“What kind of work do you want to do when you graduate?” This used to be a relatively simple question. Even if students did not know what they wished to do exactly, there were a predictable set of jobs they could choose from. However, the nature of work has been changing rapidly in recent years. Today, there are many jobs that did not exist or were not widely known a mere decade ago: jobs such as app designer, social media manager, and big data architect. And looking to the future, it is difficult to predict what jobs will look like, or how educational institutions can prepare their students for them. As one commentator said, “We are currently preparing students for jobs that don’t yet exist ... using technologies that haven’t yet been invented ... in order to solve problems we don’t even know are problems yet.” There are, however, certain clear trends that are having a big impact on the job market. Two such trends are globalization and technological innovation. Would-be workers need to understand the effects of these trends and prepare themselves by developing the necessary skills for the jobs of the future.

NOTE

Globalization will have a big impact on the future of jobs. It is not hard to imagine that workers capable and comfortable moving around the globalized world can expand their job market horizons. However, globalization does not just mean workers and goods moving across geographical borders. It also means that economic and financial systems in different countries are becoming more and more connected and interdependent. So, even without moving around physically, workers may collaborate with colleagues and clients from different countries. More importantly, the connectedness and interdependence of the global economy means that a problem in one part of the system can have effects in economies all over the world. Therefore, an ability to analyze global trends and their impacts on local economies, as well as an awareness of how a local issue can affect the globalized world, will be important for workers.

NOTE

Technological innovation is another important trend, and it can both create and destroy jobs. As smart machines become increasingly sophisticated, robots and computers will replace jobs in offices, factories and homes. Already, technological development has led to a decline in the number of jobs in manufacturing and agriculture. In addition, jobs in transportation and logistics are being replaced by machines. However, it is not just truck drivers and warehouse employees who need to worry about their future. Medium-skilled jobs with routine tasks, such as administrative and clerical positions, are also expected to be replaced by technological advancements. Furthermore, there are continued attempts to "assist"(or replace) parts of professional jobs, in medical and legal fields, for example. Clever machines can not only store and retrieve vast amounts of information more quickly and accurately than humans, but can also share the data with each other and teach themselves to ever more sophisticated levels. As a result, their combined experiences can easily surpass the experiences of individual humans. Concurrently, technological innovations are creating jobs in fields such as programming, software development, data security and web design. Other jobs in science and technology involve teams of scientists and technology specialists in identifying innovation and knowledge breakthroughs — in energy or new materials creation, for instance. These jobs will require more and more workers who can collaborate across different fields.

NOTE

Such changes in job markets will influence the skills workers need in seeking employment. First, as globalization and technological innovations continue, both employers and workers will have to identify areas in which human contributions are valuable — fields that require imagination, creative thinking, analysis and deduction. Second, communication will play an important role as collaborative work among different fields increases. Third, the capacity to continuously learn new skills will be vital, as rapid changes in society and technology constantly require new ways to cope with them.

In the future, jobs may take an ever more fluid form. Even now, there are people who earn money by creating YouTube content many people wish to watch, organizing concerts for digital virtual singers, or playing computer games for spectators. The nature of jobs will continue to change into the future. Future workers should prepare themselves to deal with trends like globalization and technological innovation, and gain the skills necessary to tackle the even bigger waves of change that are certain to arrive in the future.

(Based on Claudia Pompa, Jobs for the Future. Overseas Development Institute. March 2015.)

(金沢大学)

Question 1: Based on the passage, answer questions (A) to (C) in English.

(A) What are the two trends mentioned in the passage that are having a great influence on the market?

(B) What is an advantage smart machines may have over humans in professional fields such as medicine and law?

(C) What ability is needed to cope with rapid changes in society and technology?

Question 2: For statements (D) to (G), write **TRUE** if the statement matches the content of the passage.

Write **FALSE** if the statement does not match the content of the passage.

(D) Many new types of jobs have been created in recent years.

(E) The number of administrative and clerical jobs is likely to increase.

(F) Smart machines affect high-skilled professional workers as well as manual workers.

(G) Technological development makes human imagination and creativity of less importance.

Question 3: Based on the passage, what kind of changes do you think should be made to schools (for example, high school) in order to prepare students for the jobs of the future? Write your ideas in 30-40 English words.

背景知識　未来の職業

●過去の職業の変遷

・蒸気機関，エンジンの発明

馬や馬車が消える ⇔ 機関車や自動車の運転手，車掌，製造の仕事が生まれる。

・IT 革命

ファックスが消える ⇔ メールが普及，メールプロバイダーの仕事が生まれる。

● AI（人工知能の登場）

・無人レジ

⇒ レジ係

・小型無人飛行機　ドローン

⇒ 配送業者

・自動掃除機

⇒ ビル清掃員

・自動運転カー

⇒ 電車運転士，バスの運転手，タクシー運転手

高3 ハイレベル英語 リーディング＜長文演習編＞
第２講　解答

解答

Question 1.

（A）They are globalization and technological innovation.

（B）They can not only store and retrieve vast amounts of information more quickly and accurately than humans, but can also share the data with each other and teach themselves to ever more sophisticated levels.

（C）The ability to continuously learn new skills is needed.

Question 2.

（D）TRUE

（E）FALSE

（F）TRUE

（G）FALSE

Question 3.

First, there should be more English classes in high school. This is because globalization is a very important trend. Second, there should be more technology classes in high school. Technological innovation is another important trend. (35 words)

問題と選択肢の訳

Question 1. 本文をもとに，（A）から（C）の質問に英語で答えなさい。

（A）本文中で述べられている雇用市場に大きな影響を与えている二つのトレンドを答えなさい。

（B）医療や法律などの専門分野で，スマートマシンが人間より優れているかもしれない点を答えなさい。

（C）社会や技術の急速な変化に対応するには，どのような能力が必要とされているか答えなさい。

Question 2. （D）から（G）の説明について，本文の内容と一致する場合は「正」，不一致の場合は「誤」と答えなさい。

（D） 近年，多くの新たな雇用が創出されている。

（E） 管理職・事務職の増加が見込まれる。

（F） スマートマシンは，熟練した専門的な労働者だけでなく，肉体労働者にも影響を与える。

（G） 技術開発は，人間の想像力や創造性の重要度を低下させる。

Question 3. 本文を踏まえて，学生を将来の職業に備えさせるために，学校（例えば高校）にはどのような変化が必要だと思いますか。あなたの考えを30 ～ 40 語で書きなさい。

本文の全訳

未来の仕事

「卒業したらどんな種類の仕事がしたいの？」これは，以前は比較的単純な質問だった。たとえ学生たちは正確に何をしたいのかをわかっていないとしても，彼らが選べる予測可能な一連の仕事があった。しかしながら，近年，仕事の性質が急速に変化している。今日では，ほんの 10 年前には存在しなかったか，広く知られていなかった多くの仕事がある──アプリのデザイナー，ソーシャルメディアの管理人，ビッグデータアーキテクトなどだ。将来に目を向けても，仕事がどのようなものになっているか，あるいはそれらのために教育機関が学生たちをどのように準備させられるのかを，予測するのが難しい。あるコメンテーターが言っていたように，「我々は現在，学生たちを，まだ存在しない職業のために…まだ発明されていないテクノロジーを使うために…まだ問題なのかどうかもわからない問題を解決するために準備させている」。しかしながら，労働市場に大きな影響を与えているある明確な傾向がある。そのような傾向のふたつが，グローバリゼーションと技術革新だ。これから労働者になる人は，こうした傾向の影響を理解し，将来の仕事に必要な技能を伸ばして準備をする必要がある。

グローバリゼーションは仕事の未来に大きな影響を与えるだろう。グローバル化された世界を動き回る能力があり，すすんでやる労働者が労働市場の限界を広げることができるのは，想像に難くない。しかしながらグローバリゼーションは，単に地理的な境界線を越えて移動するということを意味しているだけではない。それは異なる国の経済や金融システムがますます連結して相互依存してくることも意味する。だから物理的にあちこち移動しなくても，労働者は様々な国の同僚や顧客と共同で働くかもしれない。もっと重要なのは，グローバル経済の連結や相互依存がそのシステムの一

部の問題が世界中の経済に影響を与える可能性があることを意味する。それゆえ，グローバルなトレンドやそれが自国の経済への影響を分析する能力，また国内の問題がいかにグローバル化された世界に影響するかについての認識が，労働者にとって重要となるだろう。

技術革新はもうひとつの重大な傾向であり，それは仕事を生むことも消すこともありえる。スマートマシンがますます洗練されていくにつれて，ロボットやコンピュータがオフィスや工場や家庭の労働に置き換わっていくだろう。すでに技術開発によって製造業や農業分野の雇用の数が減少している。さらに，運送や物流の仕事も，機械によって取って代わられている。しかしながら将来について憂慮すべきなのは，トラックの運転手や倉庫の労働者だけではない。管理職や事務職のような，中程度のスキルで定型の仕事をする仕事も，技術革新によって置き換えられると予測されている。さらに，専門的な仕事の一部例えば，医療や法律の分野の一部を「支援する」（あるいは置き換える）継続的な試みもされている。スマートな機械は，膨大な量の情報を人間より速く，より正確に保存して取り出すだけではなく，データを機械同士で共有して，相互にこれまでになく高度なレベルまで学習することもできる。結果として，機械に統合された経験は，個々の人間の経験を容易に追い越すことができる。それと同時に，技術革新は，プログラミング，ソフトウェア開発，データ保護やウェブデザインなどの分野で，新しい仕事を作り出している。科学とテクノロジー分野のその他の仕事では，イノベーションや知的大発見をするのに，科学者やテクノロジーのスペシャリストたちのチームが必要とされる。例えば，エネルギー分野や新素材の創出などだ。これらの仕事は，異なる分野を超えて，協同できる労働者をますます必要とするだろう。

労働市場のこのような変化は，雇用を求める労働者が必要とするスキルに影響を与えるだろう。第一に，グローバリゼーションと技術革新が続くにつれて，雇用者と労働者の両方が人間の貢献が価値のある分野を特定しなければならないだろう――想像力，クリエイティブな思考力，分析と推論を必要とする分野だ。第二に，異なる分野間での共同作業が増えるにつれ，コミュニケーションが重要な役割を果たすだろう。第三に，新しいスキルを常に学習し続ける能力が極めて重要となるだろう。社会とテクノロジーにおける急速な変化は，常に新しい対処方法を必要とするからだ。

将来の仕事はこれまで以上に流動的になるだろう。今でさえ，多くの視聴者が見たくなる YouTube のコンテンツを作成したり，デジタルのバーチャルな歌手のためのコンサートを組織したり，あるいは観客の前でコンピュータゲームをしたりしてお金を稼いでいる人々がいる。職業の性質は将来にわたって変化し続けていくだろう。将来の労働者たちは，グローバリゼーションや技術革新のようなトレンドに対処するように準備して，将来確実に訪れるさらに大きな変化の波に対応するのに必要なスキルを身につけるべきだ。

第２講　重要語彙リスト

＊一つ一つ何度も繰り返して，
覚えてください

1	relatively	比較的
2	predictable	予測可能な
3	mere	ほんの
4	decade	10 年間
5	institution	機関
6	commentator	解説者
7	globalization	グローバル化
8	innovation	革新
9	would-be	なるつもりの
10	geographical	地理的な
11	interdependent	相互依存の
12	collaborate	共同して働く
13	connectedness	連結性
14	awareness	自覚していること
15	smart machine	コンピュータ制御の機械
16	sophisticate	～を洗練させる
17	lead to a decline in	減少を引き起こす
18	manufacturing	製造業
19	logistics	物流
20	warehouse	倉庫
21	medium-skilled	中程度のスキルの
22	routine task	定型業務
23	administrative	管理の
24	clerical	事務の
25	advancement	発展
26	store	データをメモリに記憶する
27	retrieve	～を読み出す
28	surpass	～を上回る
29	concurrently	同時に
30	identify	～を特定する
31	breakthrough	大発見
32	contribution	貢献
33	creative thinking	創造的思考
34	deduction	推論
35	vital	極めて重要な
36	constantly	絶えず
37	fluid	流動性を持つ
38	virtual	仮想の
39	spectator	観客
40	tackle	～に取り組む

第２講　音読用白文　①②③④⑤⑥⑦⑧⑨⑩

Jobs for the Future

"What kind of work do you want to do when you graduate?" This used to be a relatively simple question. Even if students did not know what they wished to do exactly, there were a predictable set of jobs they could choose from. However, the nature of work has been changing rapidly in recent years. Today, there are many jobs that did not exist or were not widely known a mere decade ago: jobs such as app designer, social media manager, and big data architect. And looking to the future, it is difficult to predict what jobs will look like, or how educational institutions can prepare their students for them. As one commentator said, "We are currently preparing students for jobs that don't yet exist ... using technologies that haven't yet been invented ... in order to solve problems we don't even know are problems yet." There are, however, certain clear trends that are having a big impact on the job market. Two such trends are globalization and technological innovation. Would-be workers need to understand the effects of these trends and prepare themselves by developing the necessary skills for the jobs of the future.

Globalization will have a big impact on the future of jobs. It is not hard to imagine that workers capable and comfortable moving around the globalized world can expand their job market horizons. However, globalization does not just mean workers and goods moving across geographical borders. It also means that economic and financial systems in different countries are becoming more and more connected and interdependent. So, even without moving around physically, workers may collaborate with colleagues and clients from different countries. More importantly, the connectedness and interdependence of the global economy means that a problem in one part of the system can have effects in economies all over the world. Therefore, an ability to analyze global trends and their impacts on local economies, as well as an awareness of how a local issue can affect the globalized world, will be important for workers.

Technological innovation is another important trend, and it can both create and destroy jobs. As smart machines become increasingly sophisticated, robots and computers will replace jobs in offices, factories and homes.

Already, technological development has led to a decline in the number of jobs in manufacturing and agriculture. In addition, jobs in transportation and logistics are being replaced by machines. However, it is not just truck drivers and warehouse employees who need to worry about their future. Medium-skilled jobs with routine tasks, such as administrative and clerical positions, are also expected to be replaced by technological advancements. Furthermore, there are continued attempts to “assist”(or replace) parts of professional jobs, in medical and legal fields, for example. Clever machines can not only store and retrieve vast amounts of information more quickly and accurately than humans, but can also share the data with each other and teach themselves to ever more sophisticated levels. As a result, their combined experiences can easily surpass the experiences of individual humans. Concurrently, technological innovations are creating jobs in fields such as programming, software development, data security and web design. Other jobs in science and technology involve teams of scientists and technology specialists in identifying innovation and knowledge breakthroughs — in energy or new materials creation, for instance. These jobs will require more and more workers who can collaborate across different fields.

Such changes in job markets will influence the skills workers need in seeking employment. First, as globalization and technological innovations continue, both employers and workers will have to identify areas in which human contributions are valuable — fields that require imagination, creative thinking, analysis and deduction. Second, communication will play an important role as collaborative work among different fields increases. Third, the capacity to continuously learn new skills will be vital, as rapid changes in society and technology constantly require new ways to cope with them.

In the future, jobs may take an ever more fluid form. Even now, there are people who earn money by creating YouTube content many people wish to watch, organizing concerts for digital virtual singers, or playing computer games for spectators. The nature of jobs will continue to change into the future.

Future workers should prepare themselves to deal with trends like globalization and technological innovation, and gain the skills necessary to tackle the even bigger waves of change that are certain to arrive in the future.